16 Channel Multiplexed

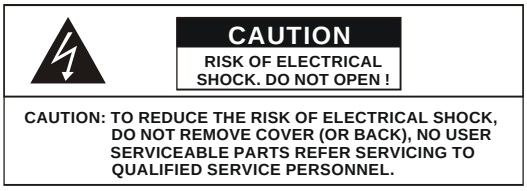
Digital Video Recorder

Owner's Manual

Customer Support 1-800-774-0284

15540 Herriman Blvd. Noblesville, IN 46060

Safety Precautions


CAUTION
RISK OF ELECTRICAL SHOCK. DO NOT OPEN !
CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER (OR BACK), NO USER SERVICEABLE PARTS REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

A lightning flash with an arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of insulated dangerous Voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock.

An exclamation point within an equilateral triangle is intended to alert the user of important operation and maintenance (servicing) instructions in the literature accompanying the appliance..

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE UNIT TO RAIN OR MOISTURE. THIS UNIT IS NOT DESIGNED FOR OUTDOOR USE.

Attention: Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

Power Disconnect. Units with or without ON-OFF switches have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON-OFF switch is the ON position. The power cord is the main power disconnect for all units.

Warranty and Service

There are no serviceable parts inside this unit, call the manufacturer for details.

About this document

Before installing the DVR, be sure to thoroughly review and follow the instructions in this User's Manual. Pay particular attention to the parts that are marked **NOTICE**.

Also, when connecting with an external device, first turn the power OFF and follow the manual's instructions for a proper installation.

Please read all instructions before setting up the DVR

1. This document is intended for both the administrator and users.
2. This manual contains information for configuring, managing and using your DVR.
3. To prevent fire or electrical shock, do not expose this product to heat or moisture.
4. For questions and technical assistance of this product, contact our technical support at 800-774-0284.

Strong recommendations on installation of the DVR:

1. Ensure that the electricity at the place you want to install the DVR is stable and meets electrical requirements.
2 Unit generates heat which must be properly discharged. Do not place objects beside exhaust port(fan) on the left and the right side of the unit..
3. Place your DVR unit in a well-ventilated area. Do not place heat-generating objects on top of the unit.

FCC Statement:

WARNING

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference. (2) This device must accept any interference received including interference that may cause undesired operation.

*** Federal Communications Commission (FCC) Statement**

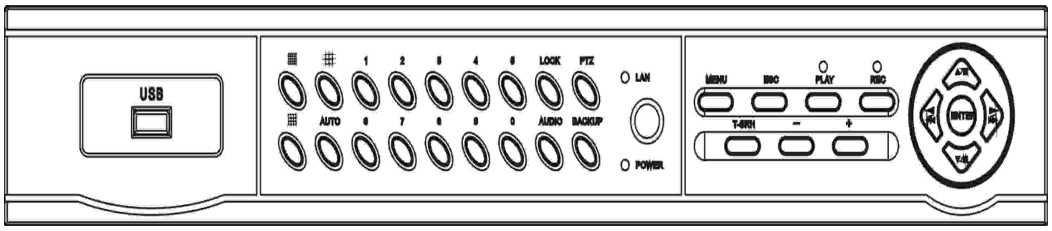
WARNING

This Equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

* You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

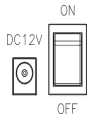
FRONT PANEL



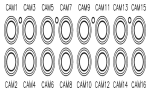
1. ⊞ / ⊞ / ⊞ **:** Split screen mode select button
2. **Number button 0 ~ 9 :** Channel 1 ~ 16 full screen select button
   Channel 1 ~ 9, press 0 + 1 ~ 0 + 9
   Channel 10 ~ 16, press 1 + 0 ~ 1 + 6
3. **AUTO** : Auto sequence mode
4. **LOCK** : Press this button to operate Key Lock function
5. **PTZ** : To PTZ control mode
6. **AUDIO** : Audio on or off select button
7. **BACKUP** : Image backup button
8. **UP / STOP** : Direction button UP / Playback stop button▲ / ■
9. **DOWN / PAUSE** : Direction button down / Playback pause ▼/ ▮▮ (Step play)
10. **REW / LEFT** : Reverse playback choose button / play speed ◀ / ◀◀
11. **FF / RIGHT** : Forward playback choose button / play speed ▶ / ▶▶
12. **ENTER** : Enter button or value change(+)
13. **MENU** : Press this button to display the menu setup
14. **ESC** : Press this button to exit menu
15. **T-SRH** : Press this button to playback time search
16. **PLAY** : Press this button to playback
17. **+** : Increase + value.
18. **REC** : Press this button to start recording
19. **-** : Reduce - value
20. **USB 2.0** : Thumb Drive slot ▭

*User should plug in USB again if ActiveX is loaded, image is backed up, or version is updated.

REAR PANEL



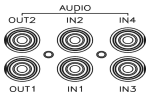
Power code in 12V/5A, power switcher (ON / OFF)



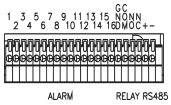
Camera 1 ~ 16 input BNC type

Call / Main Monitor out

VGA out



Audio channel input x 4 and output x 2(left and right)



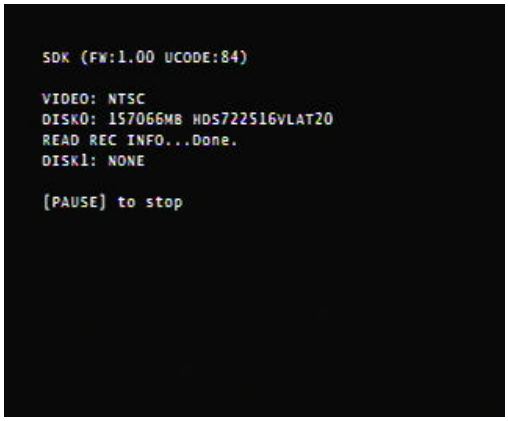
Alarm / Relay / RS 485 connector

RJ-45 (Network connector)

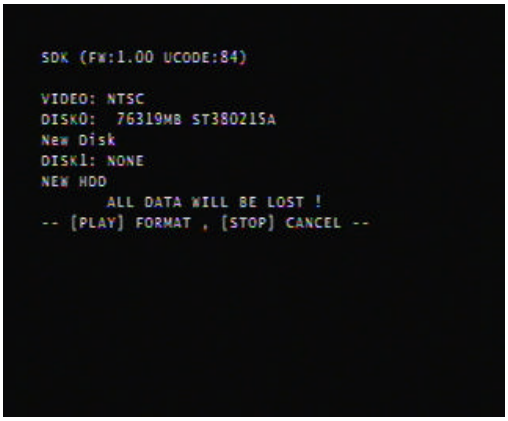
PS2 type mouse connector

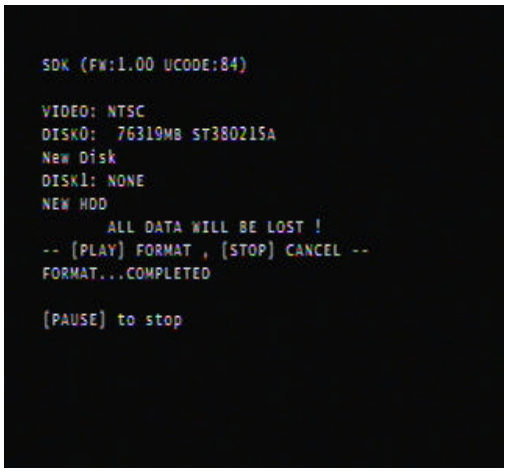
RS232/ISP: Not available

DVR Initialing



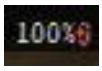
or detecting a new hard disk





Live screen

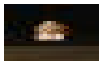
Recording icon



Overwrite

Motion

Alarm



Event (Motion / Alarm)

Video loss

Keypad lock * 111111 is the default password

Mouse Control

1 Screen display	1. Double-click on the left button of desired camera to display full screen 2. Double-click on the left button of desired camera to view quad screen
3 Menu display	1. One-click right button to view menu OSD 2. Back to last OSD page
2 None	No function
1 Select	Selects Item to be viewed or changed

Operate:

MENU BUTTON : Press MENU button to enter menu setup or exit

ESC : Press ESC button to exit menu

ENTER BUTTON : Press Enter button to confirm set or value change(+)

DIRECTION BUTTON : MENU item select

+ BUTTON : Increase + value

- BUTTON : Reduce - value

BACKUP : To backup mode

PTZ : To PTZ control mode

(△▽) MOVE (ENT) SELECT (MENU) EXIT

Remote control:

The keys on the remote control function the same as the front keypad of the unit.

Channel select 1 ~ 16 camera

Quad / Split screen

Auto: Channel sequence

Audio **:** Audio on / off

Note: See what is on remote now

UP / STOP : Direction button UP / Playback stop button

REW **:** Reverse playback choose button

DOWN / PAUSE : Direction button down / Playback pause

FF **:** Forward playback choose button

ENTER **:** Enter button or value change

MENU **:** Press this button to display the menu setup

BKUP **:** Image backup button

ESC **:** Press this button to exit menu

T-SRH **:** Press this button to playback time search

PLAY **:** Press this button to playback

REC **:** Press this button to start recording

+ BUTTON **:** Increase + value ▷

- BUTTON **:** Reduce - value ◁

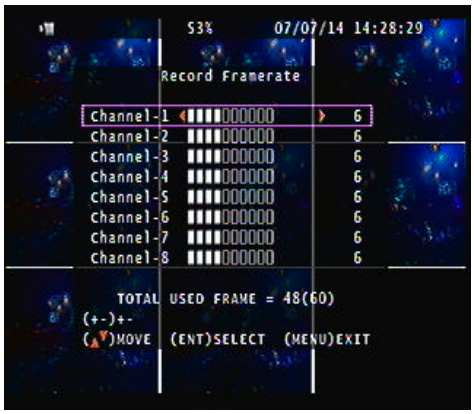
Main MENU – Camera Set

Main MENU – Camera Set – Title

Camera title setup function allows 5 characters for each channel.

Main Menu – Record Set

Record Set – Record Framerate



Record Set – Record Quality: High / Normal / Low

Record Set – Event Rec Duration: 5 / 10 / 15 / 20 / 25 / 30

Record Set – Auto Record: After 1 ~ 8 minutes, auto start to record if no operation.

Record Set - Data Retention Set: 1 ~ 15 days

Record Set – Schedule Record

Record Set – Schedule Record

Record Set – Schedule Record

1%
04/23/2008 15:25:30
Schedule Record
0 0 0 0 0 1 1 1 1 1 2 2
0 2 4 6 8 0 2 4 6 8 0 2
No Record
Schedule Record
Motion Record
Alarm Record
Schedule + MD + Alarm Record
(▲▼)MOVE (ENTER)SELECT (MENU)EXIT

Note: Hours of the day are displayed in Military (24 Hour) time format. Example:

0
0 = Midnight to 1:00 am

0
2 = 2:00 am – 3:00 am

0
4 = 4:00 am – 5:00 am

1
6 = 4pm – 5:00 pm etc.

The empty spaces in between are the odd numbered hours of the day.

Notice:

1. Each channel has its own frame rate adjustment for each recording mode.
2. You can adjust each channel frame rate of different record modes, such as schedule, motion detection, and alarm record mode.
3. Press ⊞ button to change to different record modes.

1. Schedule record mode

1%
04/23/2008 15:25:59
Schedule Record
0 0 0 0 0 1 1 1 1 1 2 2
0 2 4 6 8 0 2 4 6 8 0 2
No Record
Schedule Record
Motion Record
Alarm Record
Schedule + MD + Alarm Record
(▲▼)MOVE (ENTER)SELECT (MENU)EXIT

2. Motion record mode

1%
04/23/2008 15:26:06
Schedule Record
0 0 0 0 0 1 1 1 1 1 2 2
0 2 4 6 8 0 2 4 6 8 0 2
No Record
Schedule Record
Motion Record
Alarm Record
Schedule + MD + Alarm Record
(▲▼)MOVE (ENTER)SELECT (MENU)EXIT

3. Alarm record mode

1%
04/23/2008 15:26:27
Schedule Record
0 0 0 0 0 1 1 1 1 1 2 2
0 2 4 6 8 0 2 4 6 8 0 2
No Record
Schedule Record
Motion Record
Alarm Record
Schedule + MD + Alarm Record
(▲▼)MOVE (ENTER)SELECT (MENU)EXIT

4. Schedule, motion, and alarm record mode

1%
04/23/2008 15:26:32
Schedule Record
0 0 0 0 0 1 1 1 1 1 2 2
0 2 4 6 8 0 2 4 6 8 0 2
No Record
Schedule Record
Motion Record
Alarm Record
Schedule + MD + Alarm Record
(▲▼)MOVE (ENTER)SELECT (MENU)EXIT

Record Time Table: 250GB HD

Record Quality: Low. Average: 5 KB;

REC FPS	60	30	15	10
REC Hour	237.6	488.4	976.8	1465.2

Record Quality: Normal. Average 10 KB;

REC FPS	60	30	15	10
REC Hour	118.8	244.2	488.4	732.6

Record Quality: High. Average 20 KB;

REC FPS	60	30	15	10
REC Hour	59.4	122.1	244.2	366.3

This table is only for reference. Frame rate will vary slightly with the complexity of the images being recorded.

20 K x 30 (frame rate) x 60 (mins) x 60 (secs) = 2160000 K = 2160 M / hr

2160 M / hr x 24 = 51840000 K = 51840 M = 51.84 G / (1 Day)

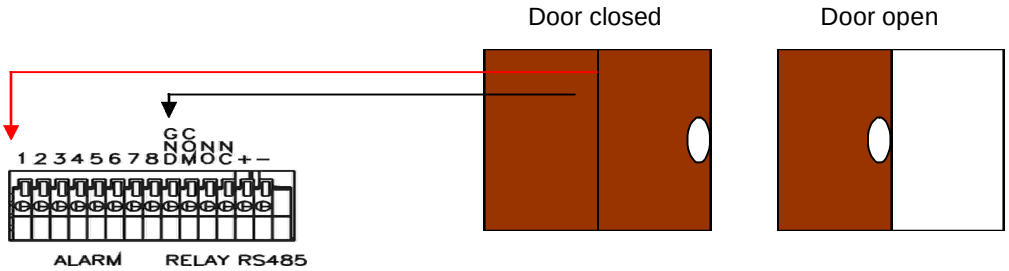
Please format hard disk before starting recording after all the HDD installation

Hard disk compatible table

IDE	Seagate	Hitachi	WD(AAJB)
Status	80 ~ 750 GB OK	80 ~ 750 GB OK	80 ~ 750 GB OK

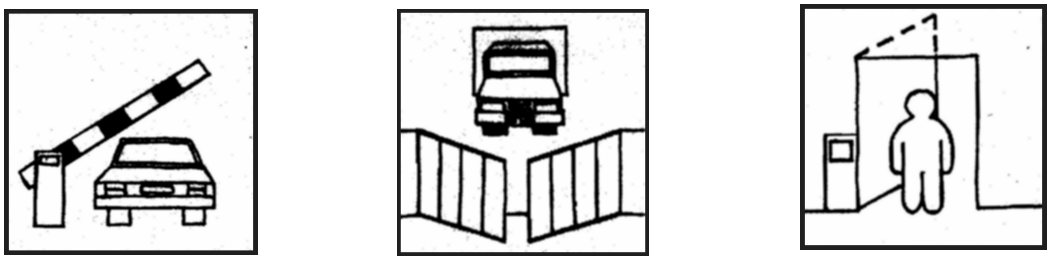
Main Menu – Alarm Detection 1 ~ 16

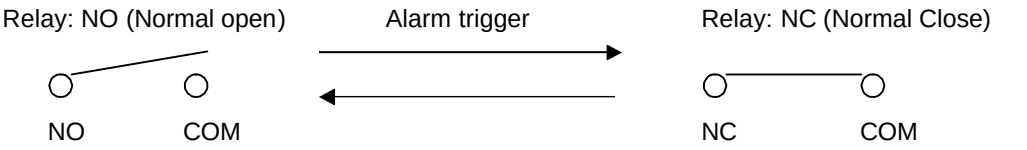
Alarm Signal type depends on Alarm Sensor polarity defined as NO (N/Open) or NC (N/Close) mode. Alarm POP UP: Event channel jumps to full screen when alarm is triggered. Quad screen with the alarm symbol will display if more than two cameras are triggered.



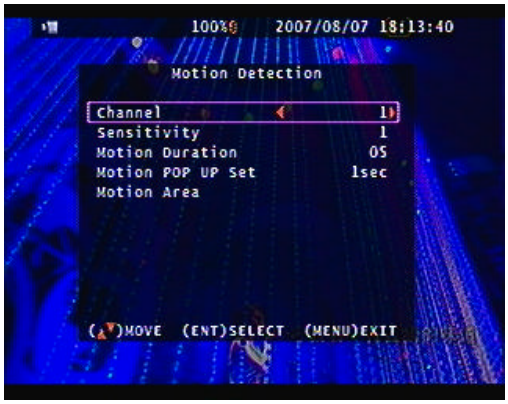
Relay: NO + COM or NC + COM

Relay action:

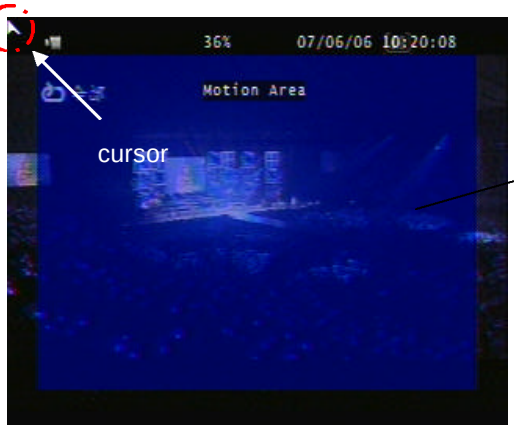




Main Menu – Motion Detection 1 ~ 16



Main Menu – Motion Detection – Motion Area

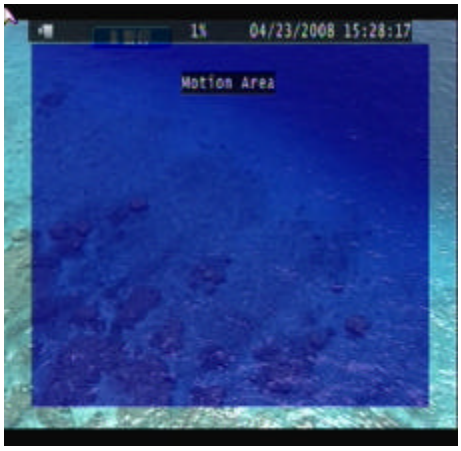


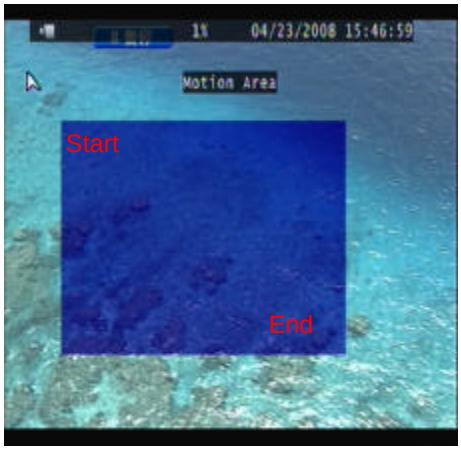
Motion POP UP: Motion channel jumps to full screen when motion is triggered. 16 split screen with an alarm symbol is displayed if more than two cameras are triggered.

Main Menu – Motion Detection – Motion area selection

Direction button Left or Right + ENTER to cancel detection area.

Select start (right-up corner) point and end (left-below corner) point of detect area.



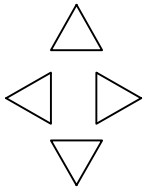


One-click of the mouse left button will cancel detected area.

Select start (right-up corner) point and end (left-below corner) point of detection area.

Main Menu – Screen – Border: Quad border On / Off display

Main Menu – Screen – Video Adjustment: Video screen position movement



Main Menu – Screen – VGA Frequency and VGA

After selecting, press ENTER to see the changed resolution. Press ENTER to change, press ESC to cancel. If no change is made, the mode will change back to the last status after 15 seconds.

DVR needs to reboot if 1280x1024 resolution is adjusted.

Main Menu – Audio Set

- To record audio, set to “on”. Adjust input/output levels for desired sound.
- Mute turns off live audio.

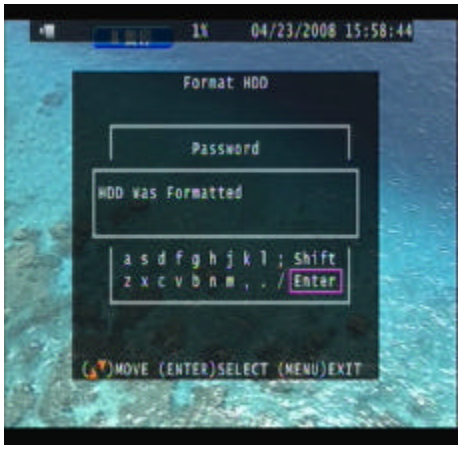
Main Menu – System Set – Hard Disk

Main Menu – System Set – Format HDD

Main Menu – System Set – Hard Disk Setup – Format HDD – Password

1%
04/23/2008 15:58:02
Format HDD
Password
111111
1 2 3 4 5 6 7 8 9 0 - = ←
q w e r t y u i o p [ ]
a s d f g h j k l ; Shift
z x c v b n m , . / Enter
MOVE (ENTER)SELECT (MENU)EXIT

HDD was formatted successfully.



-The correct password needs to be entered before formatting the hard disk. The password is the same as the default unlock password, which is 111111.

- Please set HDD to Master if only one is installed. Second HDD, if used, should be set to Slave.

Main Menu – System Set – Security Protection - Password Change

Menu Protection:

On / Off. If set to “on”, you need to enter your password to access the menu.

Auto Key Lock:

After 1 ~ 120 seconds the system automatically goes into key lock mode. You will have to “unlock” before operating the DVR..

Main Menu – System Set – Time Set

Select your time zone and auto time synchronization with an NTP server. An internet connection is required for the NTP server. The NTP server does not work under network DHCP mode. After time set or daylight mode turns to on, you need to Apply and confirm. 0 ~ 9 is repeatable with increase + button,

and decrease - button. If the DVR is connected to a network system, enable **NTP server** to get

a network request automatically.

System Set – Dwell Time Setup

(Full screen Channel auto sequence)

Main Menu – System Set – Network Settings

Network Settings – Local IP

Network Settings – Local IP – STATIC

Select static IP address / Gateway / Net Mask

Network Settings – Local IP – DHCP

Auto IP detected under IP sharing or router

Main Menu – System Set – Network – PPPOE

0%
04/23/2008 16:05:24
Local IP
PPPOE ID
a12345----------
1 2 3 4 5 6 7 8 9 0 - = ←
q w e r t y u i o p [ ]
a s d f g h j k l ; Shift
z x c v b n m , . / Enter
(▲▼)MOVE (ENTER)SELECT (MENU)EXIT

Main Menu – System Set – Network – PPPOE – ID

If the DVR is connected to the internet, enable **Main Menu – System Set – Time Set NTP server** to get a network time request automatically.

Main Menu – System Set – Network – PPPOE – Password

Input PPPoE account and password, then save & exit menu.

IP will not correctly appear on screen if your firewall or router settings block communications with your DVR.

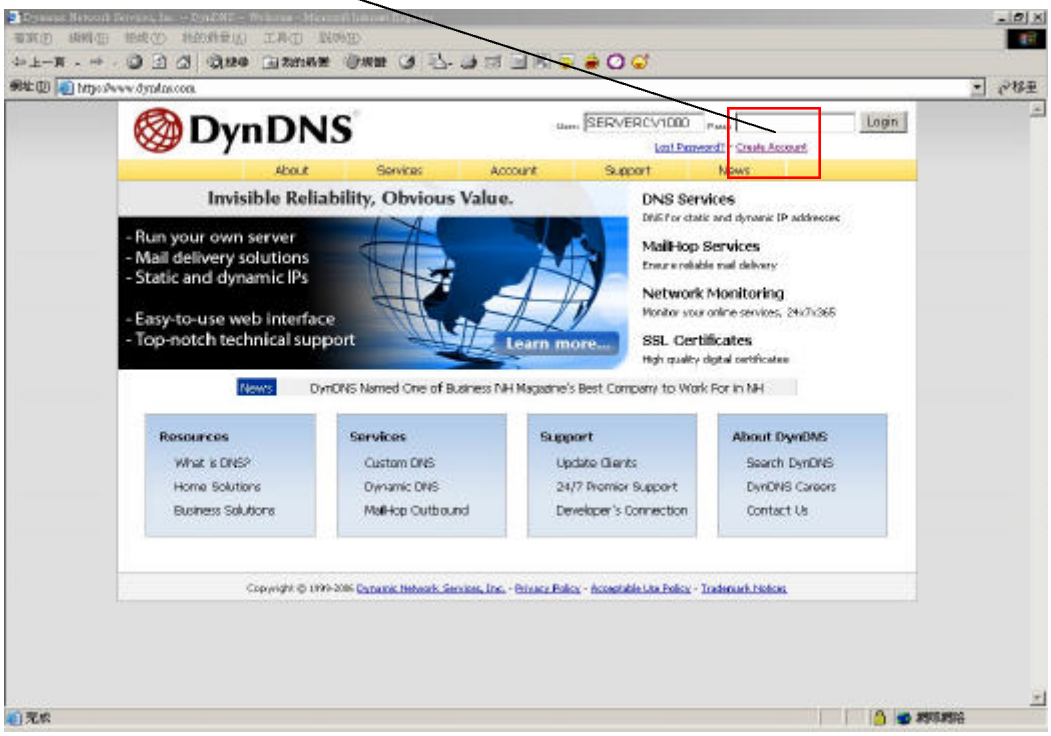
Type the IP into Net viewer or IE browser to view image via network.

Main Menu – System Set – Network – D/DNS set

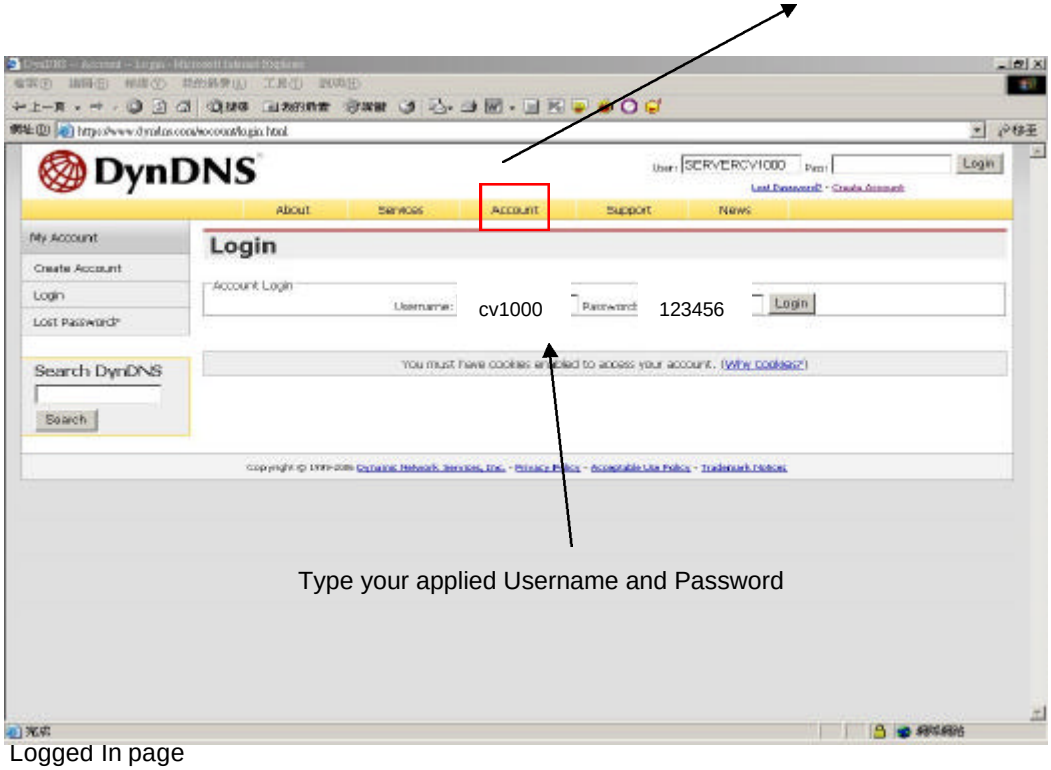
A Static IP Address (IP address does not change) from your internet service provider is the best solution to connect your DVR to the internet. If a static IP is not easily available to you, a "DNS" service is an acceptable alternative.

Ex: Enter in www.dyndns.com to apply for a free account and host name.

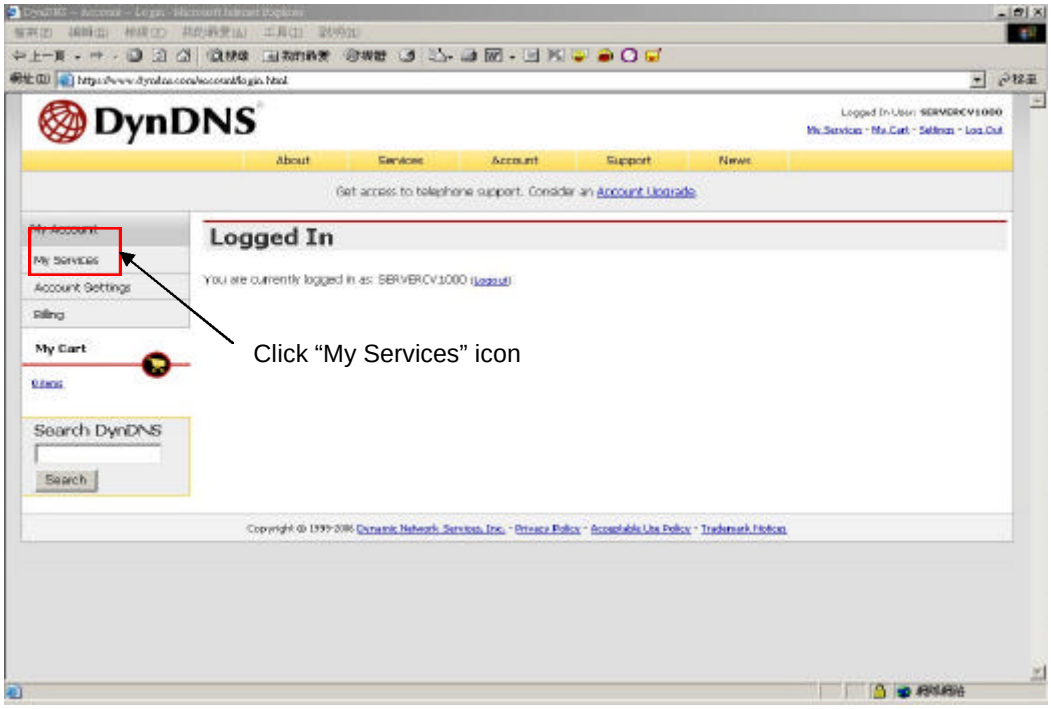
Click Create Account to make a new ID name.



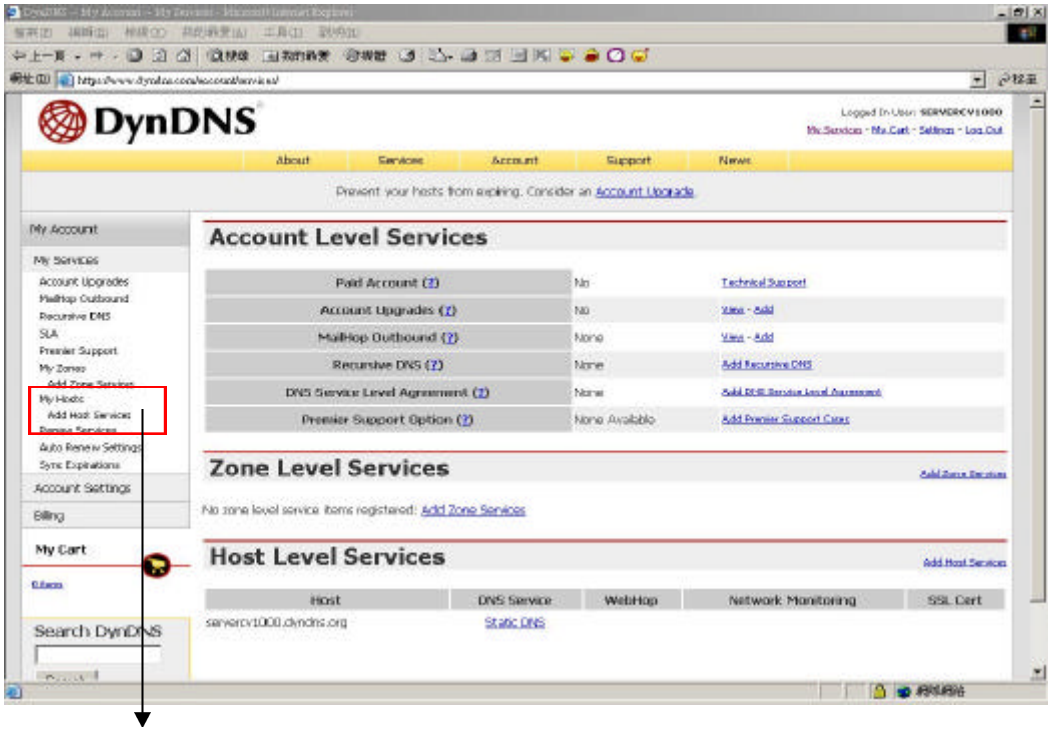
Fill in all the personal information, password, and email requested; please go to your email account to activate your new account. Return to DynDNS website; click Account to long in page.



Logged In page



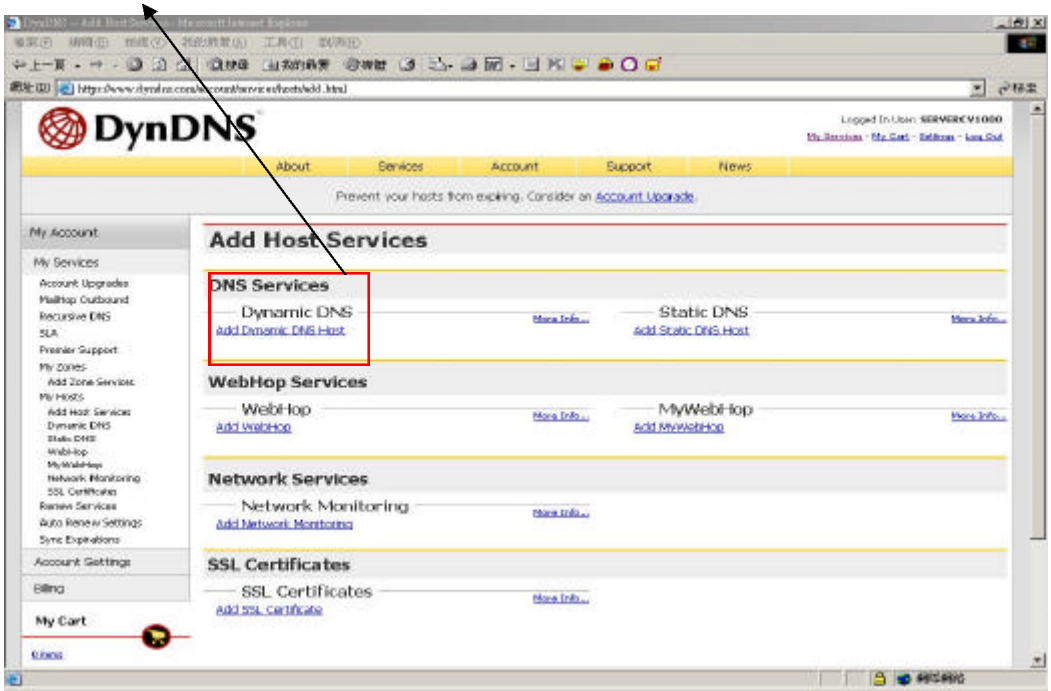
Click Add Host Services:



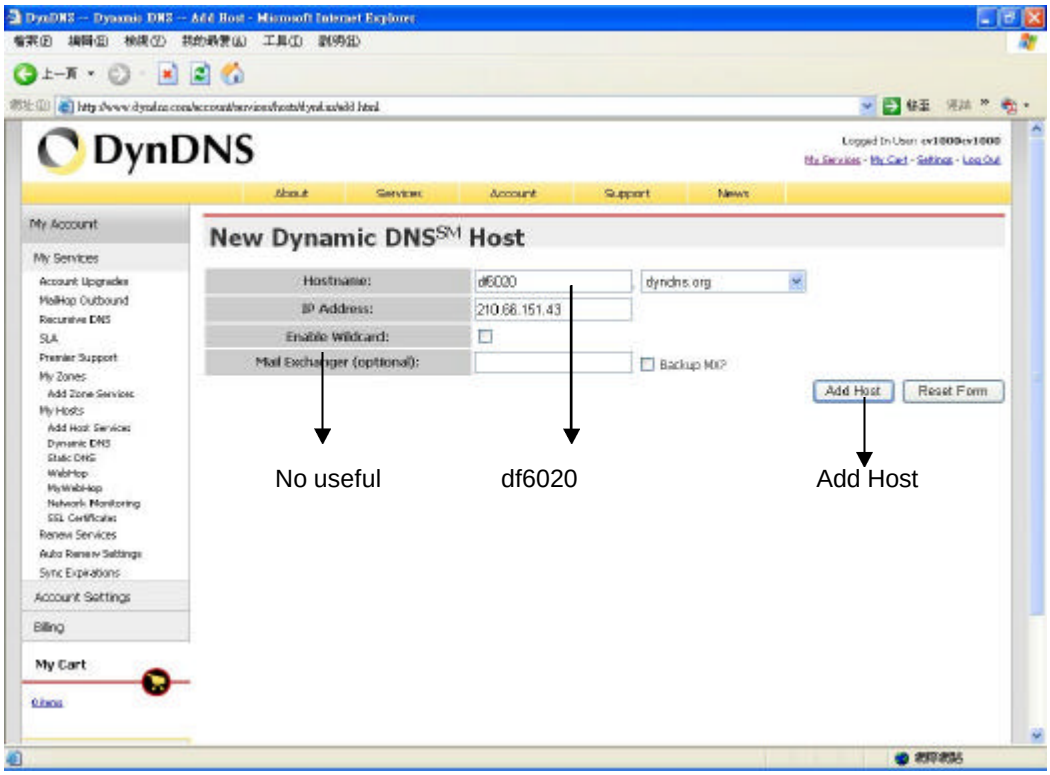
Click “Add Host Service”

Add static DNS Host:

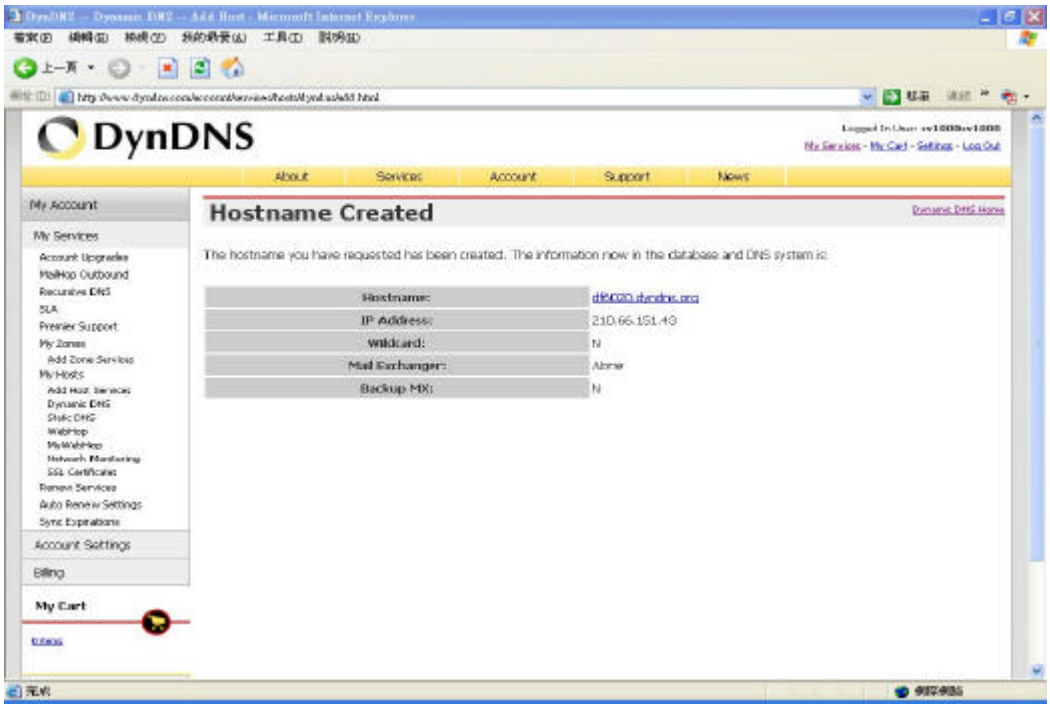
Select Static DNS: add Static DNS Host



Type a Hostname user decided.



Ex: Create a new df6020 host name, after add a new host name; DynDNS page shows a confirm message page.



Enable : YES

DNS Server: From ISP

DDNS Server: DynDNS.

HOST Name: Insert host name

User Name: Insert DynDNS username

Password: Insert DynDNS password

On IE browser blank bar, type your hostname to get on line.

DNS address is required. (Please ask your local ISP). DNS only works under DDNS mode.

Network stream speed depends on the locality bandwidth.

A download speed of 512K (minimum) is required to avoid image degradation.

Main Menu – System Set – RS-485

Main Menu – System Set – Pan/Tilt Device

Control: Keypad, mouse

* Mouse control: press ESC to enter PTZ mode, press AUTO button, then click the left button of the mouse to control PTZ movement.

Preset PTZ Positions

Your new dual codec DVR will program (set) and control (call) up to four preset positions with a

programmable PTZ camera such as the Security Labs SLC-171C or Piczel 3505.

While in the PTZ mode:
To enter (SET) preset positions: Press the <QUAD / SET> button, adjust the PTZ camera to the desired view and press <1>, adjust the PTZ camera to the next desired view and press <2>, adjust the PTZ camera to the next desired view and press <3>, finally adjust the PTZ camera to the next desired view and press <4>.
To view (CALL) preset positions: Press the <AUDIO / CALL> button, then press <1>, <2>, <3>, or <4> to instantly move the PTZ camera to the previously programmed position.

Programmed positions can also be set and called with the Network Viewer program on the included software CD.

Main Menu – System Set – F/W Upgrade

Should a firmware upgrade become available for your DVR, you can install it via the USB (flash drive) port on the front of your unit. Transfer the available upgrade file (.FWI) that you have received via e-mail or from downloading from our web site onto a USB flash drive. Place your unit in the <STOP> mode, connect the USB flash drive, and follow the prompts on the F/W Upgrade Menu.

Press PLAY to start version update.

DVR automatically reboots after version is updated.

Main Menu – System Set – BUZZER SETUP

Main Menu – System Set – Load Active-X Control

Stop the hard disk before loading the Active-X control for use with a web browser.

1. Before making a connection using internet explorer, please download the ActiveX to the DVR hard disk from the CD-ROM. You can then view the DVR image via internet from any windows XP type PC.
   Steps: CD disk → ActiveX →USB flash drive → DVR (with hard disk) USB →
   Menu - System Set – Load Active-X Control → ENTER button
2. Also install ActiveX to your personal computer. Net viewer is packaged with ActiveX.exe.

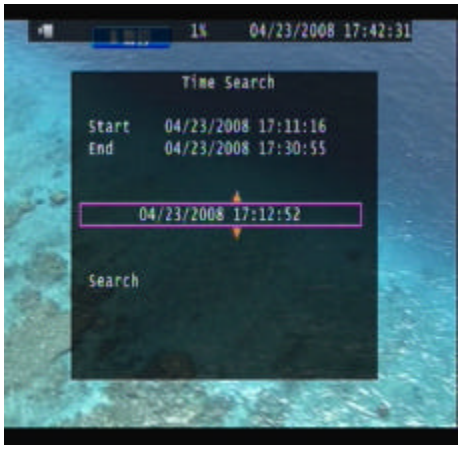
Main Menu – Search **Main Menu – Search – TIME LIST**

Main Menu – Search – Event List

Main Menu – Search – Time Search

Press ENTER to select data and time. Move cursor left and right to select item.

ENTER or + / - button to change value.



Main Menu – Search – Time Search: After data and time are selected, go to Search and then press ENTER to start playback.

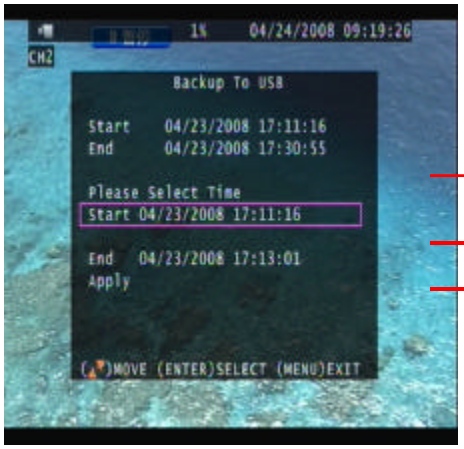
Playing

Forward speed: x 2 / x 3 / x 4 (Direction right button)
Reverse speed: x 8 / x 16 / x 32 (Direction left button)

Press STOP to search list, press ESC to live mode.

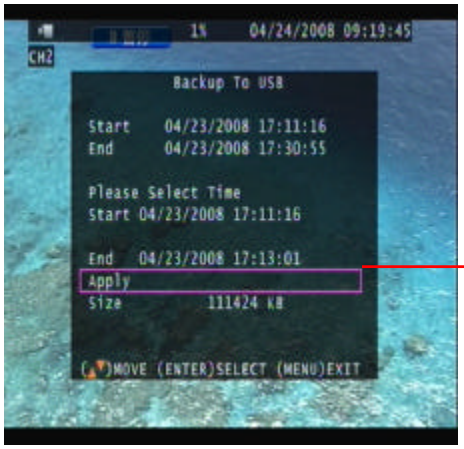
Backup mode: A USB thumb drive is required for backup. Back up file size cannot exceed 1GB. When system reads USB (thumb driver only) device, the system will stop recording for about 2 seconds

Mode 1: On live mode, press backup button to access backup page.



Total hard disk date & time range

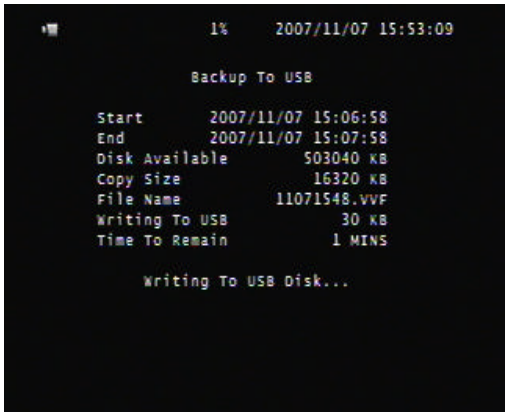
Select start and end time of backup



After selecting backup time, select apply to display data size. After size appears, press backup button to access USB page.

DVR is reading thumb drive

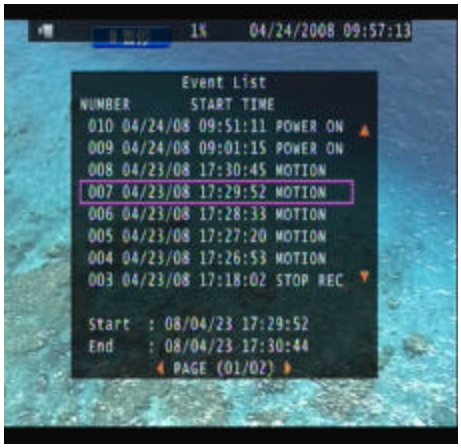
After a while, all backup information displays on screen. You can press backup button to start the file backup. Data is writing to USB thumb drive, please wait until backup is complete before removing drive, or damage will occur to your unit. Press menu button to quit USB page.



Mode 2: Press play button to start playback. The playback beginning time is the last event recorded. Press + and – to select backup time. You can only increase seconds in this backup mode. Press backup button to return to the USB page (which is the same as Mode 1).

Mode 3: Access events with the T-SRH button. Adjust end date and time.

Mode 4: On event list, choose an event recording, and press the backup button. The USB page will then be displayed. Press the backup button.



USB compatible(Max. 4G)

ADATA / Transcend / San Disk / Kingston

Main Menu – Language – English or Other

Main Menu – Exit

Save changes if any function value has changed, then exit the menu.

Operate:

MENU BUTTON : Press MENU button to enter menu setup or exit

ESC BUTTON : Press ESC button to exit menu

ENTER BUTTON : Press Enter button to confirm set or value change(+)

DIRECTION BUTTON : MENU item select

+ BUTTON : Increase + value

- BUTTON : Reduce - value

BACKUP : To backup mode

PTZ : PTZ mode

(△▽) MOVE (ENT) SELECT (MENU) EXIT

Net viewer

① ②

⑧

③ ④ ⑤ ⑥

Viewer function:

1. Backup file player
2. Network viewer
3. Connection

DVR control via viewer:*

4. DVR screen: Split, Channel full screen / Key lock / Channel auto sequence.
   Audio ON : stream speed – not good. OFF : stream speed – good
5. DVR function: MENU / ESC / Play / REC / T-SRH / - values change / + values change
6. DVR direction button: Up (Item select, Play Stop) / Down (Item select, Play Pause)
   Left (Item select, Play Reverse) / Right (Item select, Play Forward)
   ENT (ENTER): Item confirm/select, values change)
7. DVR menu pop-up
8. Audio volume (PC site)

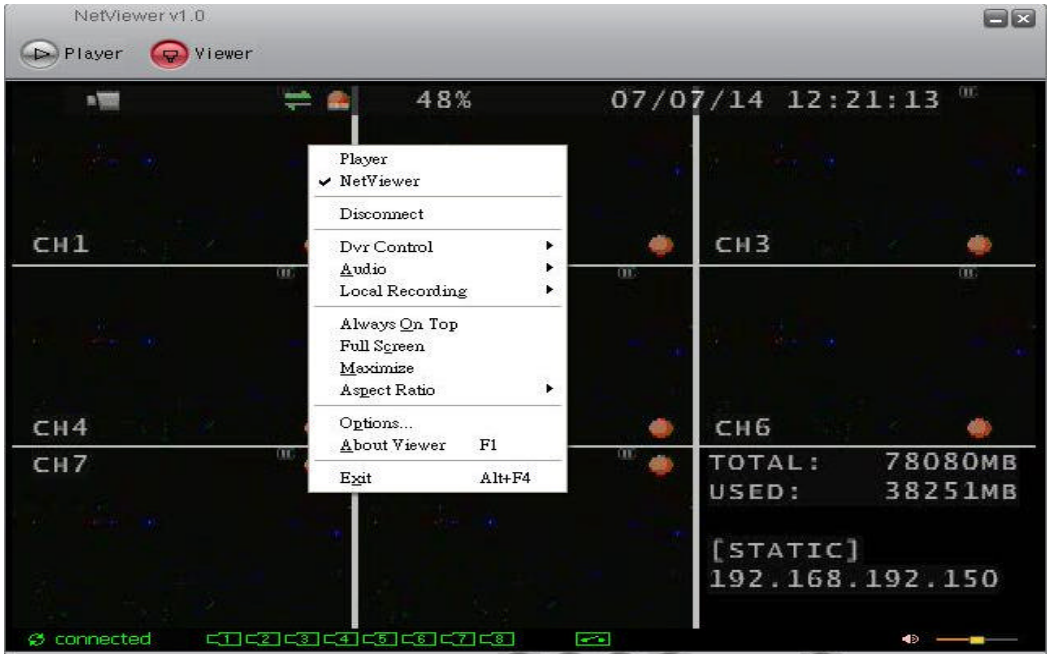
*Viewer control panel button is the same as the DVR keypad.

*Viewer and DVR display simultaneously.

*PTZ control is supported on viewer and control s the same way as the DVR keypad.

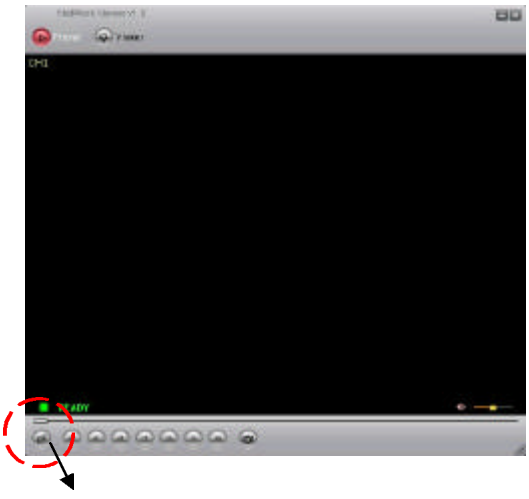
*PTZ control and movement speed depends on network streaming.

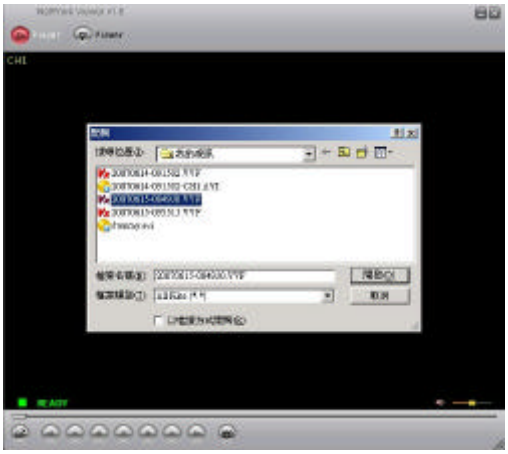
Viewer configures:



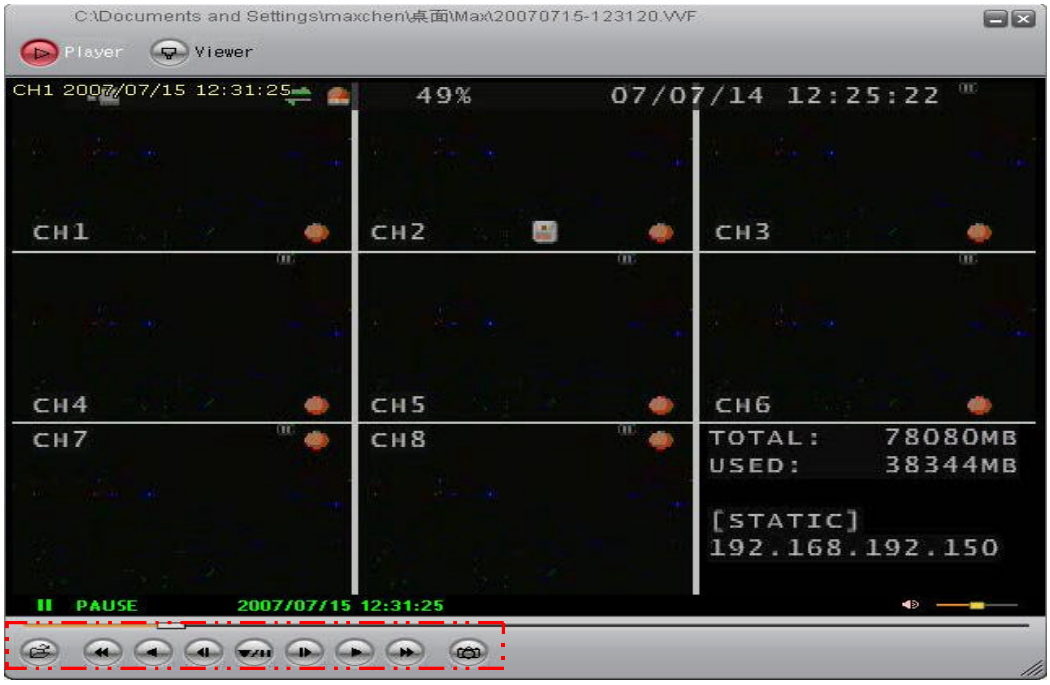
Player	Switch to backup file play mode
Netviewer	Switch to DVR network viewer
Disconnect	Network log out and connect canceled
Dvr Control	DVR function control
Audio	Audio volume adjust (PC site)
Local Recording	Viewing image record
Always On Top	Player always on top even when other data folders are opened
Full Screen	Player screen to full size
Maximize	Full screen display
Aspect Ratio	Resolution 640 x 448 / 640 x 544 adjust
Options	Viewer function setup
	Always on Top: Player or viewer always on top even when other data folders are opened
	Auto Reconnection: Reconnection if network is disconnected.
About Viewer	Viewer version
Exit	Close viewer

File Player:





Click browser to open file that was saved

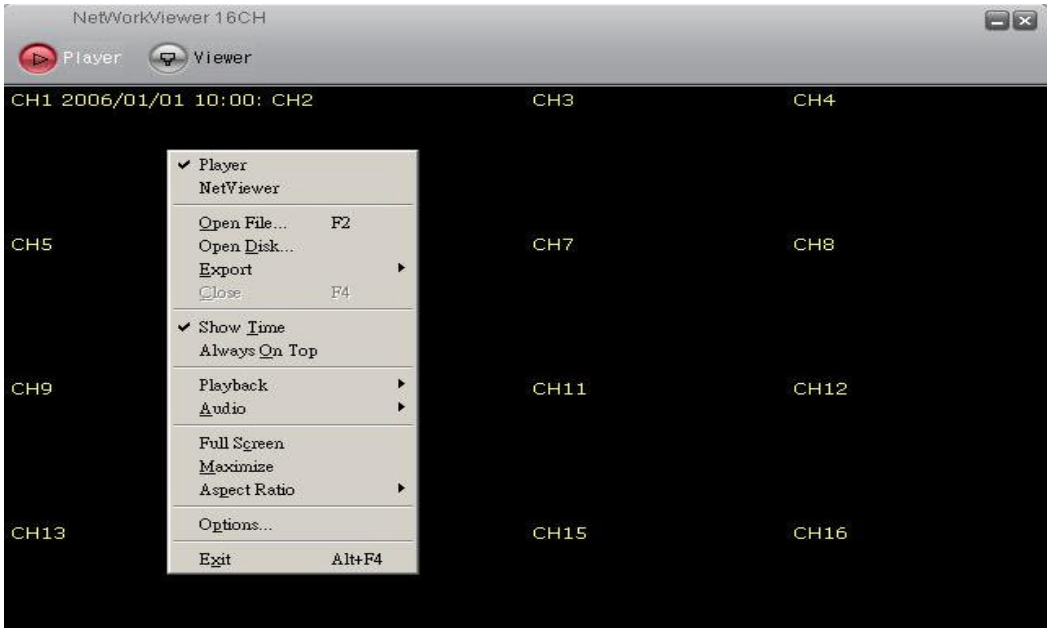


Player button

Open \ Fast Backward \ Play Reverse \ Previous Frame \ Pause \ Next Frame \ Play Fast Forward \ Still Capture

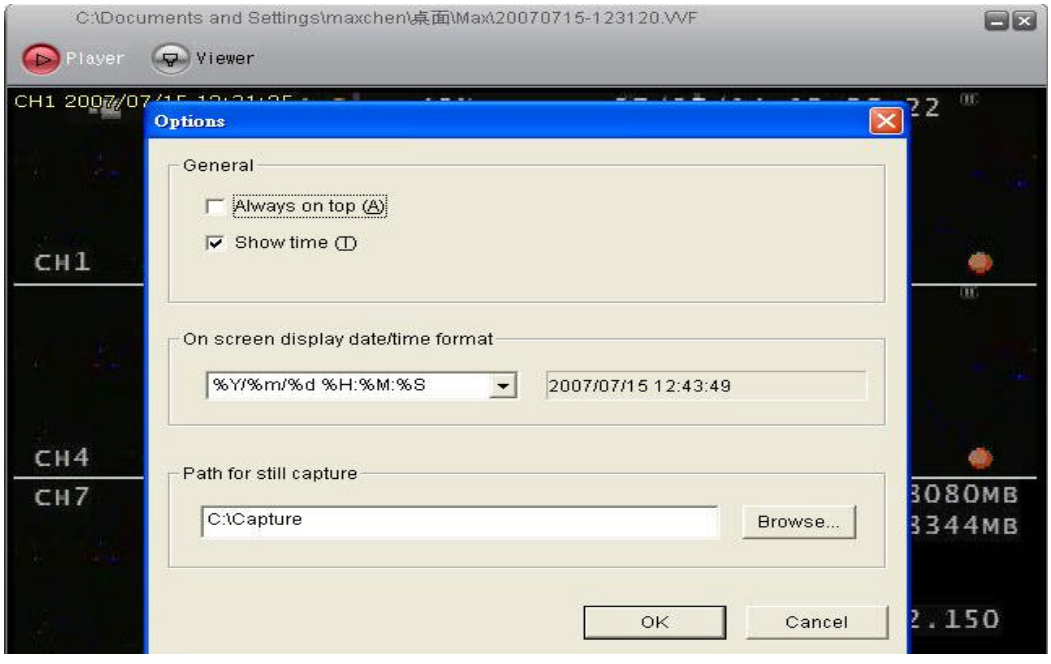
1. DVR USB or net viewer backup file (*.VVF) only can be read in player
2. Local recording file only read in player, except transfer to AVI.
3. Backup file includes video and audio

Player Configure:



Player	Switch to backup file play mode
Netviewer	Switch to DVR network viewer
Open File	Open the backup file
Open Disk	Open the DVR hard disk, which is installed to PC IDE slot
Export	Backup file to AVI files transform (Video + Audio). See AVI page
Close	Player Button control disable
Show time	Shows the backup beginning time
Always on Top	Player always on top even when other data folders are opened
Playback	Play back mode and speed select. Same as Play button
Audio	Audio volume adjust (PC site)
Full screen	Screen to full size
Maximize	Player to full screen
Aspect Ratio	Player resolution adjust
Options	See Next page
About viewer	Version of viewer
Exit	Player and viewer exit

Options



User creates or selects a record path

Always on top: Player always on top even when other data folders are opened

Show time: Shows the PC time when you started recording the backup file

On Screen display date/time (Show time) format: Please select the date format you want.

%Y/%M/%d %H:%M:%S: 2007/06/15 15:32:29

%y/%M/%d %H:%M:%S: 07/06/15 15:32:29

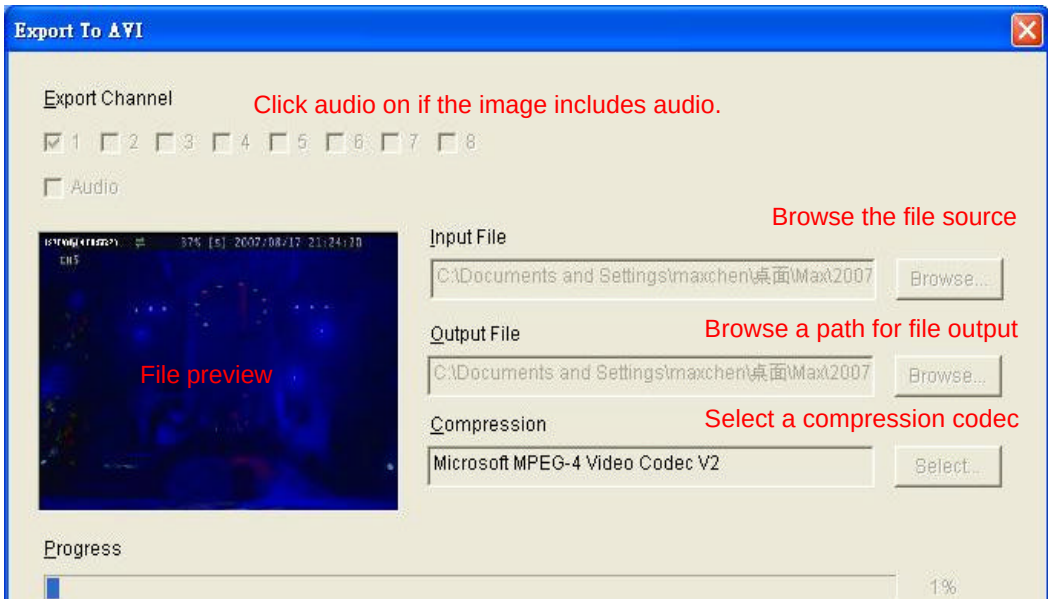
%Y/%M/%d %p %H:%M:%S: 2007/06/15 PM 03:32:29

%M/%Y/%d %p %H:%M:%S: 07/06/15 PM 03:32:29

%M %d %H:%M:%S %Y: JUN 15 15:32:29 2007

%M %d %p %H:%M:%S %Y: JUN 15 PM 03:32:29 2007

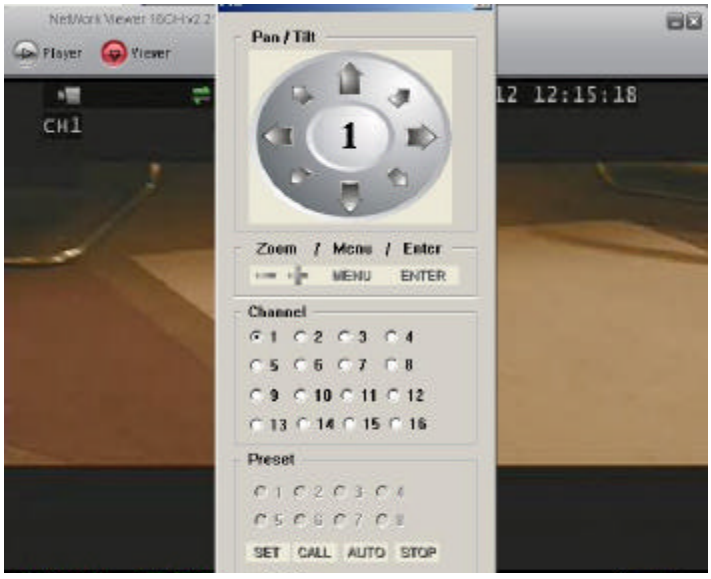
VVF file export to AVI



Percentage of the export AVI progress

Please wait until file export is completed before closing window.

PTZ Control mode



Channel / Direction

Near / Far, Call OSD,
Menu confirm

Select camera channel

Set presets

Zoom -- / + : Lens, Near / Far

Menu: Call PTZ OSD

Enter: OSD value confirm

Channel: Select PTZ channel

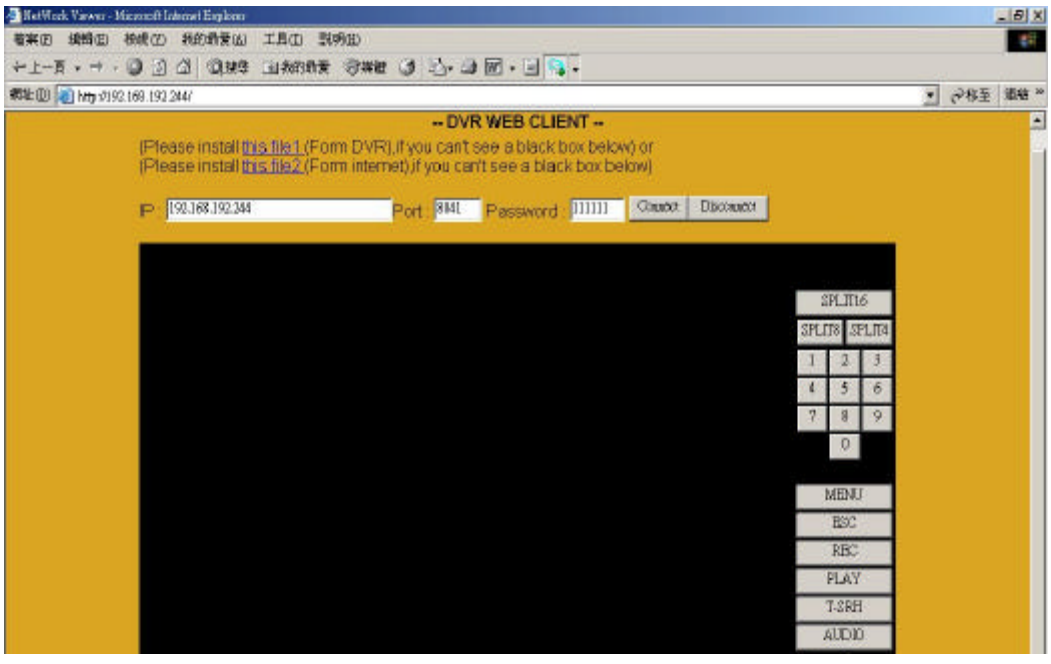
Preset: Preset setup

Select preset 1 ~ 8, and then click SET to save. Click CALL to run preset.

Click AUTO to start all presets. Click STOP to terminate.

CLEAR, delete preset 1 ~ 8

IE browser:



IE control button is the same as the DVR keypad.

1. Before making the DVR IE connection, please download the ActiveX to the DVR hard disk from the CD-ROM, and then you can view the DVR image via internet from any windows XP PC.
   Steps: CD disk → ActiveX →USB thumb drive → DVR (with hard disk) USB →
   Menu - System Set – Load Active-X Control → ENTER button

2. Also install ActiveX to your personal computer. Net viewer is packaged with ActiveX.exe.

Specification

Channel	
Input	16 CH Inputs 1.0Vp-p, 75ohm unbalanced (BNC Type)
Output	Main monitor x 1 / Call monitor x 1
S/N Ratio	More than 40dB
Color	6.7 Million
Monitoring Method	
Channel Display	Single / Quad channel / 9 split screen / 16 split screen

Sequence Display	Available. 0 ~ 999 seconds.
Resolution	704 x 448 (NTSC); 704 x 544 (PAL)
Display Rate	480 fps (NTSC) / 400 fps (PAL)

Record / Play Function

Recording Rate	704 x 224 : Max 60 fps(NTSC); 704 x 272 : Max 50 fps(PAL) 352 x 224 : Max 120 fps(NTSC); 352 x 272 : Max 100 fps(PAL)
Recording Resolution	704 x 224(NTSC); 704 x 272(PAL) 352 x 224(NTSC); 352 x 272(PAL)
Record Quality	High, Normal, Low
Compressed Picture	Storage: MJPEG, network / internet: MPEG4
Record Control	Auto / manual / schedule / motion / alarm
Playback Mode	Time list / event list / Date & Time search

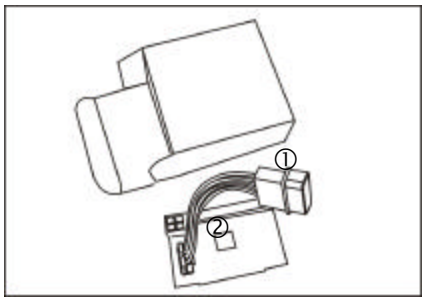
Other Function

Operation Mode	Record / Play / Network
Motion Detect	16 x16 grids camera for all channel
Alarm	Alarm in x 16 / Relay out x 1
Back-Up	USB 1.1/2.0 memory and network remote backup
Storage	HDD x 4
Audio Input	RCA x 4
Audio Output	RCA x 2
HDD Record Mode	Full stop / overwrite
Remote Backup	Through client application
PTZ Control	PELCO-D, PELCO-P, MERIT LI-LIN
Key Lock	Yes
Real Time clock (RTC)	Support NTP (Network Time Protocol)
Remote Control	Support PHILIPS RC5, NEC

Network Function

Ethernet	10 /100 Base-T
Web interface	Support licensed software AP
Network Connection	TCP/IP, PPPoE, DHCP, DDNS
Client Application	Display / playback / PTZ control / DVR control
Power Supply	DC 12V / 5A

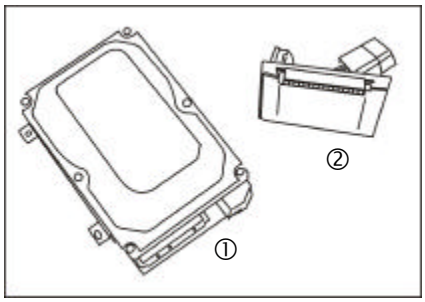
SATA INSTALLATION



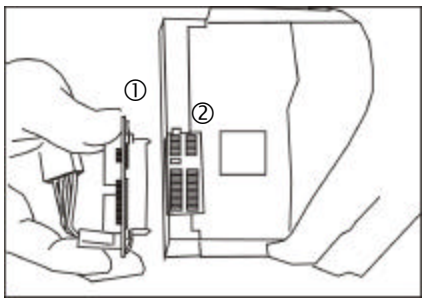
Optional Accessories:

SATA converter board

1. Power jack
2. SATA interface port



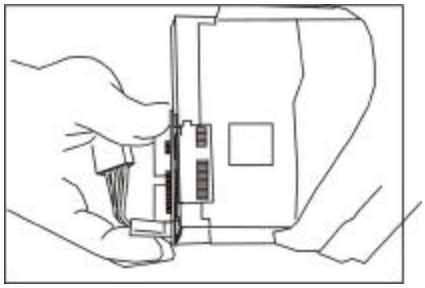
1. SATA type Hard disk
2. SATA converter board



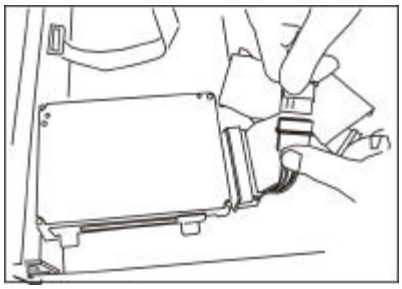
1. SATA converter board

to

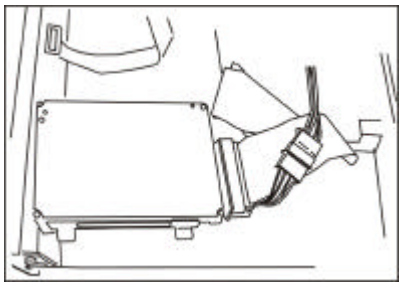
2. SATA type Hard disk

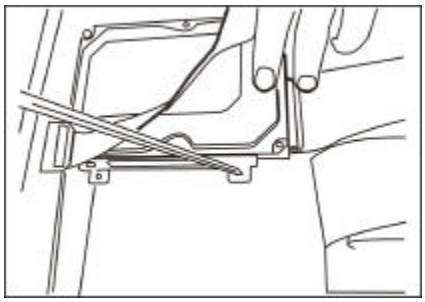


Connect at each end

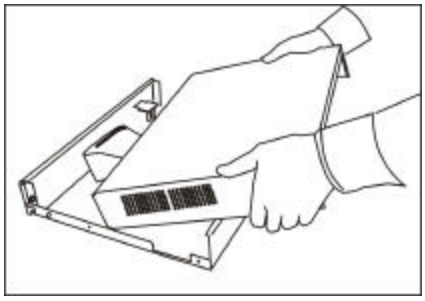


IDE drive may also be connected.

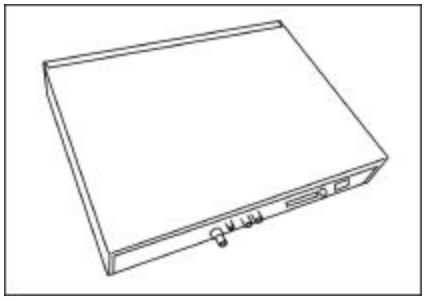




Secure drive(s) with appropriate mounting brackets and screws.



Attach top cover before powering up unit



SATA type Hard disk compatible

Hitachi series 80 ~ 750 GB OK

WD(AAJB) series 80 ~ 750 GB OK